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GOVERNMENT OF THE
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AVAILABILITY OF THE EIGHTH (8th) EDITION OF THE "CANADIAN ELECTRICAL CODE PART I".

The Eighth Edition of the Canadian Electrical Code has now been published and a supply of this Code has been obtained by the Provincial "Electrical Protection Branch". Copies of this publication may now be obtained from the Edmonton or District Offices of the Provincial Electrical Protection Branch. The price per copy is $1.75 postpaid.

When ordering copies of the Code through the mail, requests should be sent to the Provincial Electrical Protection Branch in Edmonton and be accompanied by a remittance made payable to the Provincial Treasurer.

SWIMMING POOL LIGHTING INSTALLATION STANDARDS.

In recognition of the fact that submerged lighting fixtures used for illumination of public and private swimming pools have been responsible for numerous fatal and near fatal exposures of swimmers to electrical shock, extensive investigations are now being conducted to determine what supplementary precautionary measures may be necessary in these types of installations to prevent hazardous conditions from developing. These investigations have revealed two installation methods, the details of which are listed below, that will ensure a reasonable degree of safety under most conditions.

It has been indicated that an acceptable level of safety may be attained in installations supplied from 115 volt AC grounded systems, even though water may accidently come in contact with energized parts due to faceplate breakage, leaking gaskets, etc., if effective grounding is maintained, at all times, on all metallic non-current-carrying parts of wiring systems and fixtures. While systems incorporating materials such as rigid conduit with threaded hub fittings throughout may be relied upon to ensure grounding continuity, it is evident that certain types of cable connections, locknuts and bushings at knockout fittings, flexible connections, etc., may not result in effective and proper grounding being maintained. Therefore, ordinary metallic raceway systems, because of their susceptibility to high resistance joints at connections, should not be solely depended upon to ensure effective grounding and immediate operation of circuit overcurrent devices under electrical fault conditions. In such cases, a separate permanently grounded conductor of adequate capacity, to which all non-current-carrying metallic parts are effectively bonded, is necessary. In addition, all energized joints and splices in junction boxes, which may be exposed to water, should be insulated with self-vulcanizing splicing compounds to provide watertight joints, and gaskets on watertight fixtures and electrical devices should be properly maintained.

An alternative installation method that provides the degree of safety desired consists of the low voltage isolating type system which has recently been developed. These

systems operate at voltages in the order of 12 volts and are supplied through isolating transformers. When wiring arrangements of this nature are employed, the special grounding facilities mentioned above are not required for the secondary wiring.

Although the Canadian Electrical Code Part I Committees have this subject under consideration, no rule amendments to specifically cover swimming pool lighting installations have, as yet, been processed. In the meantime, however, it is felt that the precautionary measures mentioned above are essential in the interests of safety and in applying the existing general Code rules to such installations emphasis is to be placed on these points.

EXTENSION OF VOLTAGE RATING AND CONDUCTOR SIZES FOR TYPE RHW-75C: RHH-90 C WIRE.

An article in the April 1961 Quarterly Bulletin outlined the restrictions, and the reasons for these, on the use of type RHW-75C: RHH-90C wire. This article indicated that the Canadian Standards Association Testing Laboratories were certifying single conductor, 600 volt, RHW-75C: RHH-90C wire, in sizes No. 4 to No. 1 inclusive, only when the marking tags included the words "For service entrance applications only", because the physical properties did not lend themselves to the conditions that would be encountered in extended vertical runs of conduit.

Since specific Code rules have now been formulated pertaining to the maximum distances between supports for vertical runs of conduit for the above mentioned conductors, the initial approval limitations established are no longer necessary. Accordingly, the C.S.A. Testing Laboratories are now prepared to authorize the labelling of type RHW-75C: RHH-90C wires and cables in voltage ratings up to 5,000 volts and in sizes up to 2,000,000 circular mills. While the tags attached to this wire in sizes of No. 4 to No. 1 AWG no longer require the wording "For service entrance applications only", the requirements outlined in the Eighth Edition of the Canadian Electrical Code following Tables 19 and 21 must be met where such conductors are placed in vertical runs of conduit.

TYPE DESIGNATIONS OF WIRES AND CABLES.

The increasing number of different types of wires and cables that have progressively been introduced has resulted in serious problems being experienced by the industry in bringing about the proper application of the multiplicity of types of conductors that are now available.

In an effort to overcome the above mentioned situation proposals were submitted to the appropriate C.S.A. Part I Code and Specifications Committees for consideration which would, if instituted, bring about a marked simplification and reduction in the number of wire type designations. During subsequent deliberations and discussions of this problem, changes have been agreed upon that should bring about the

desired end result. On this basis, revisions to the applicable Canadian Electrical Code Part I rules, such as Table 19, and the applicable specifications are now being processed.

In accordance with the above mentioned program, the Canadian Standards Association Testing Laboratories are now issuing bulletins to advise of the manner in which the existing type designations are being consolidated and of the way conductor markings should now appear. This will mean the withdrawal of a considerable number of the specific conductor types that are now shown in the Code.

While it is not anticipated that the subject changes will present any difficulties in determining the proper application of a given type of wire, if problems are experienced in this regard, further information may be obtained from the Provincial Electrical Protection Branch Offices.

ELECTRICAL ACCIDENTS.

During the last few months three more electrocutions have occurred in the Province from contact with 115 volts.

In the first instance, fatal injuries resulted when a small child came in contact with the elements of a "hot plate" that was placed on the floor, while energized, to heat water for medication purposes.

The other two electrocutions occurred when the operators of ungrounded electrical hand drills came in contact with grounded surfaces. One of the latter cases involved a First Class Journeyman electrician.

In addition to the above listed instances, numerous non-fatal electrical accidents, but many of a serious nature, have recently been investigated by the Provincial Electrical Protection Branch. These cases again emphasize the dangers presented by "low voltage" and the importance of ensuring that the recognized safety practices are followed at all times.

EDITORIAL CORRECTION.

In the article in the April 1962 Quarterly Bulletin pertaining to residential wiring standards, the reference in paragraph 3 to outlet box dimensions should be amended to read 2" x 3" x 2-1/2", instead of 2" x 3" x 1-1/2".